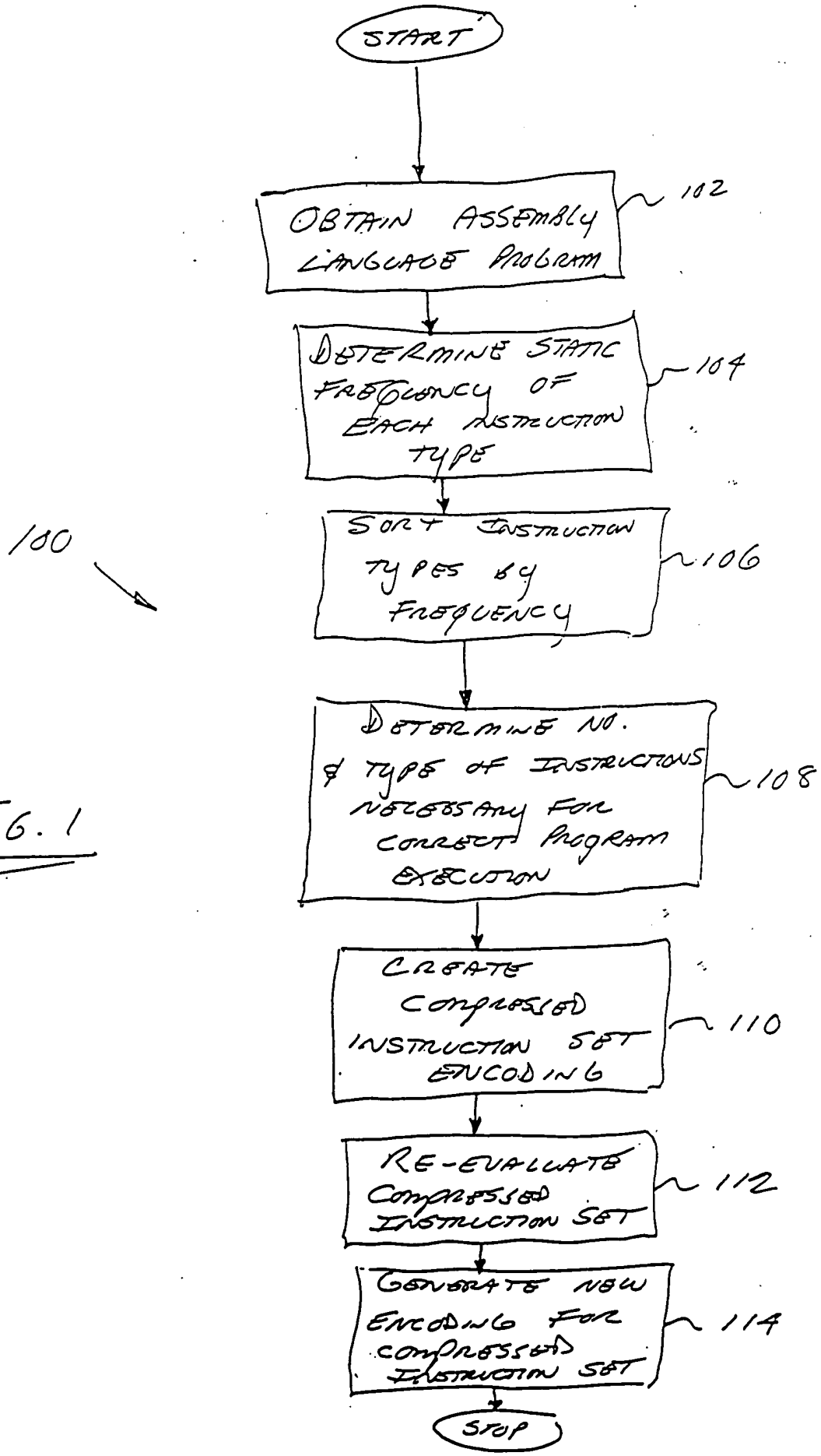

START
OBTAIN ASSEMBLY LANGUAGE PROGRAM
102
DETERMINE STATIC FREQUENCY OF EACH INSTRUCTION TYPE
104
SORT INSTRUCTION TYPES BY FREQUENCY
106
DETERMINE NO. & TYPE OF INSTRUCTIONS NECESSARY FOR CORRECT PROGRAM EXECUTION
108
CREATE COMPRESSED INSTRUCTION SET ENCODING
110
RE-EVALUATE COMPRESSED INSTRUCTION SET
112
GENERATE NEW ENCODING FOR COMPRESSED INSTRUCTION SET
114
STOP
100

F.G. 1

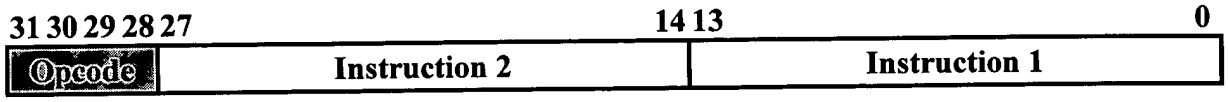

31 30 29 28 27
14 13
0
Opcode
Instruction 2
Instruction 1

Fig. 2

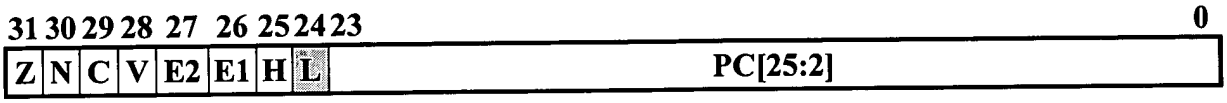

31 30 29 28 27 26 25 24 23
0
Z
N
C
V
E2
E1
H
L
PC[25:2]

Fig. 3

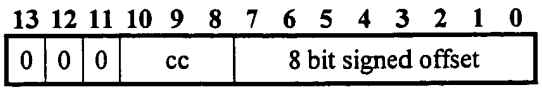


Fig. 4

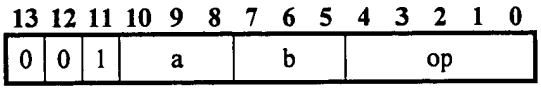


Fig. 5

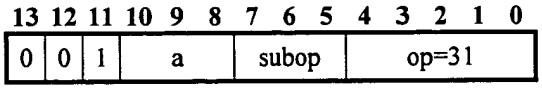


Fig. 6

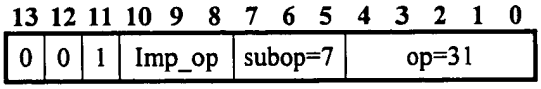


Fig. 7

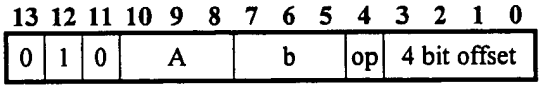


Fig. 8

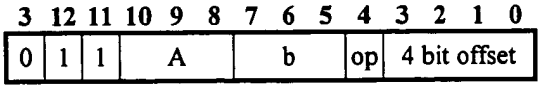


Fig. 9

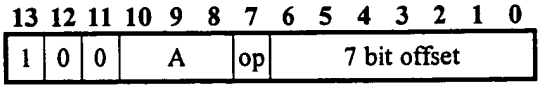


Fig. 10

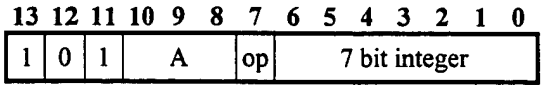


Fig. 11

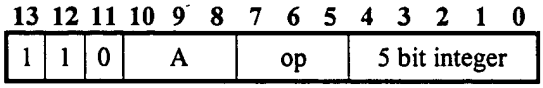


Fig. 12

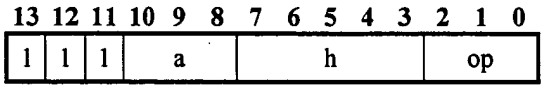


Fig. 13

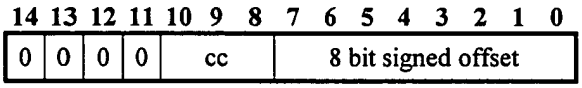


Fig. 14

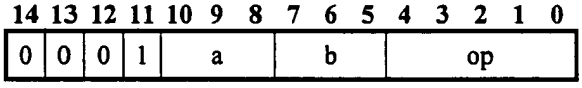


Fig. 15

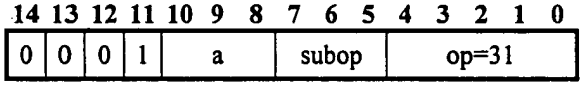


Fig. 16

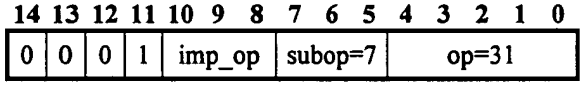


Fig. 17

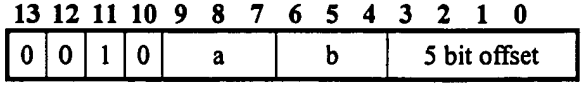


Fig. 18

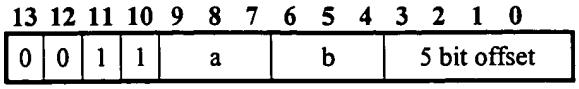


Fig. 19

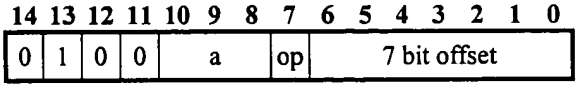
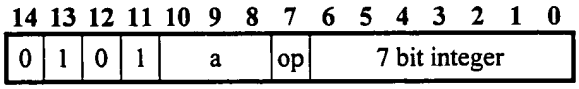


Fig. 20



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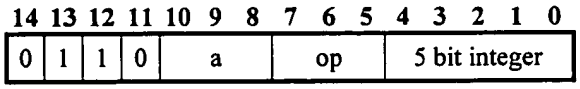


Fig. 22

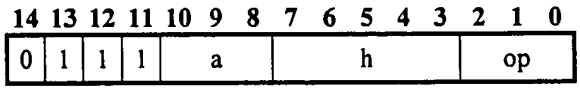
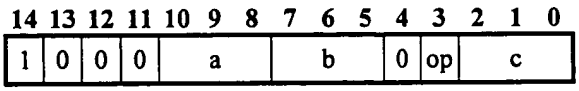


Fig. 23



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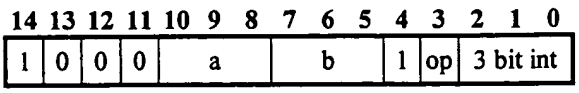


Fig. 25

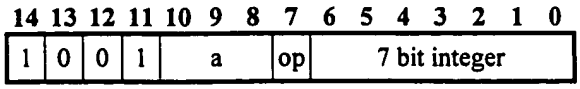


Fig. 26

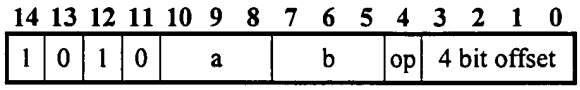


Fig. 27

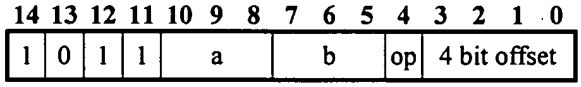


Fig. 28

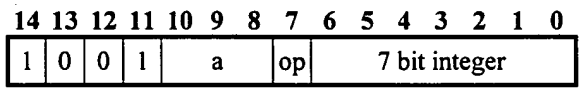


Fig. 29

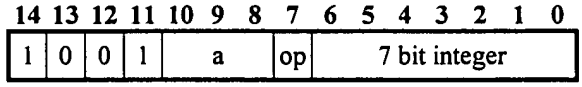


Fig. 30

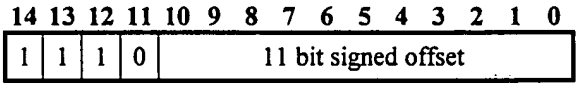


Fig. 31

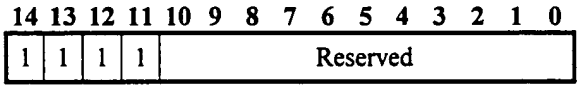
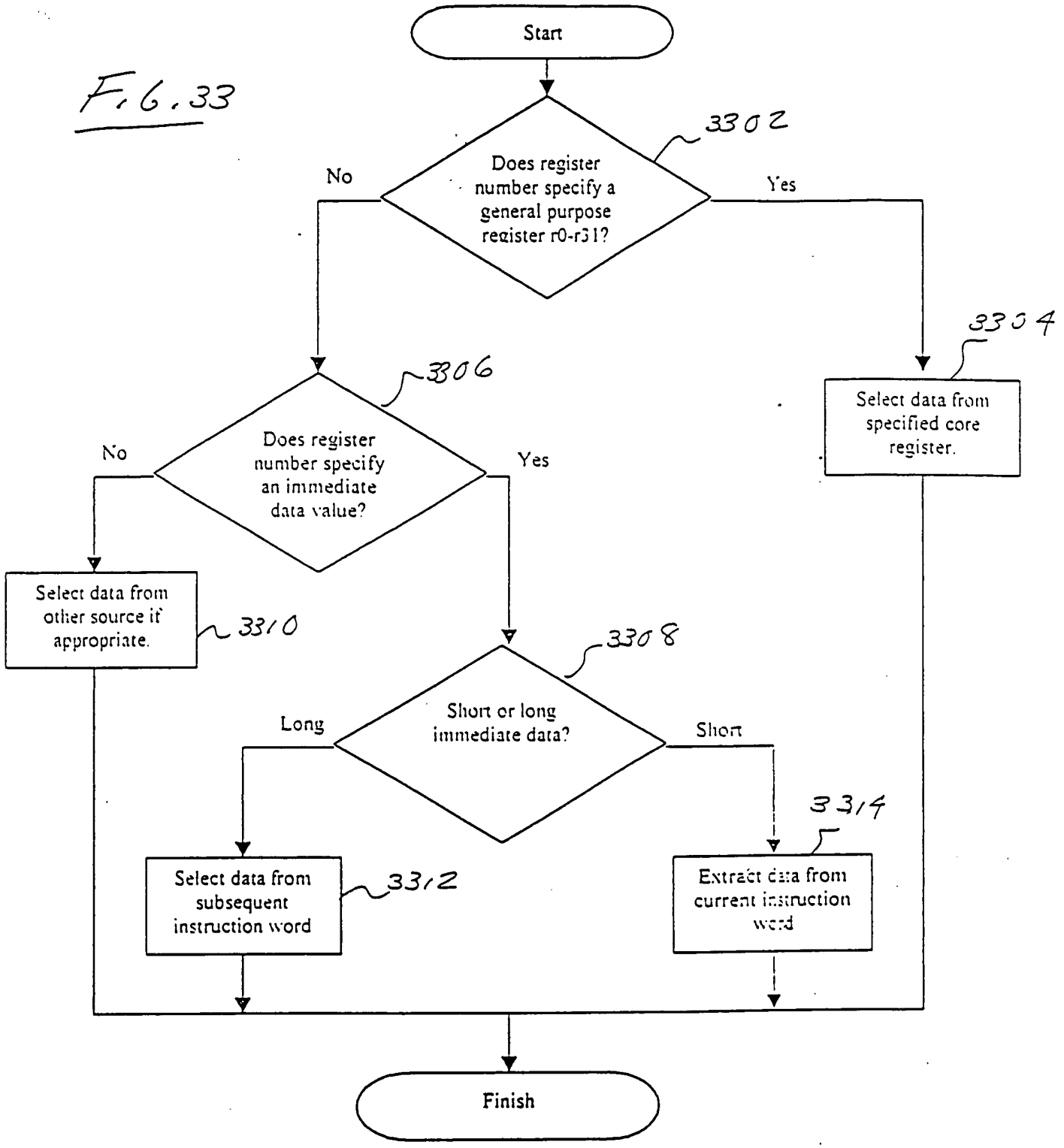


Fig. 32

F.6.33


Start
Does register number specify a general purpose register r0-r31?
3302
No
Yes
3304
Select data from specified core register.
3306
Does register number specify an immediate data value?
No
Yes
Select data from other source if appropriate.
3310
3308
Short or long immediate data?
Long
Short
3314
Select data from subsequent instruction word
3312
Extract data from current instruction word
Finish

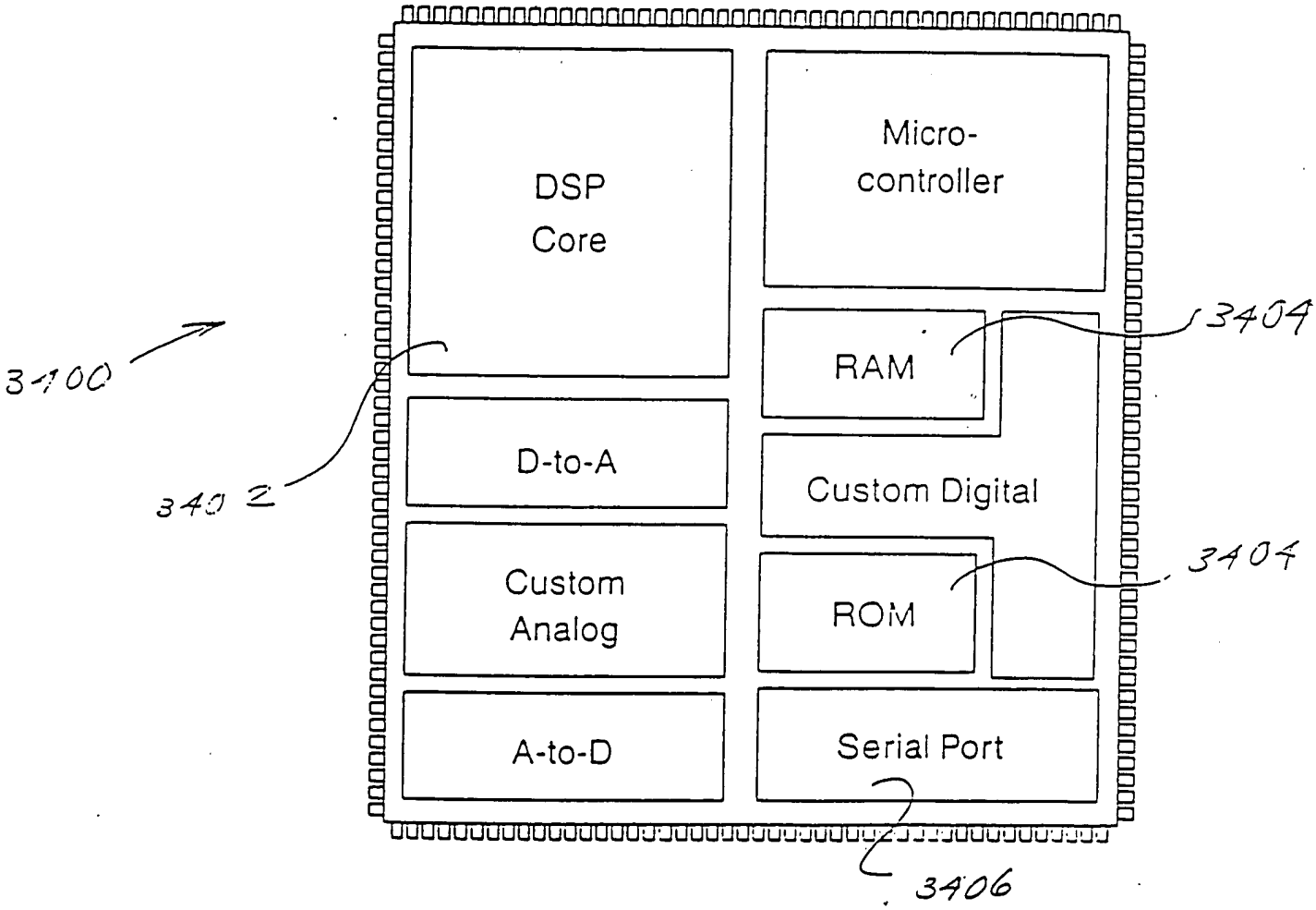
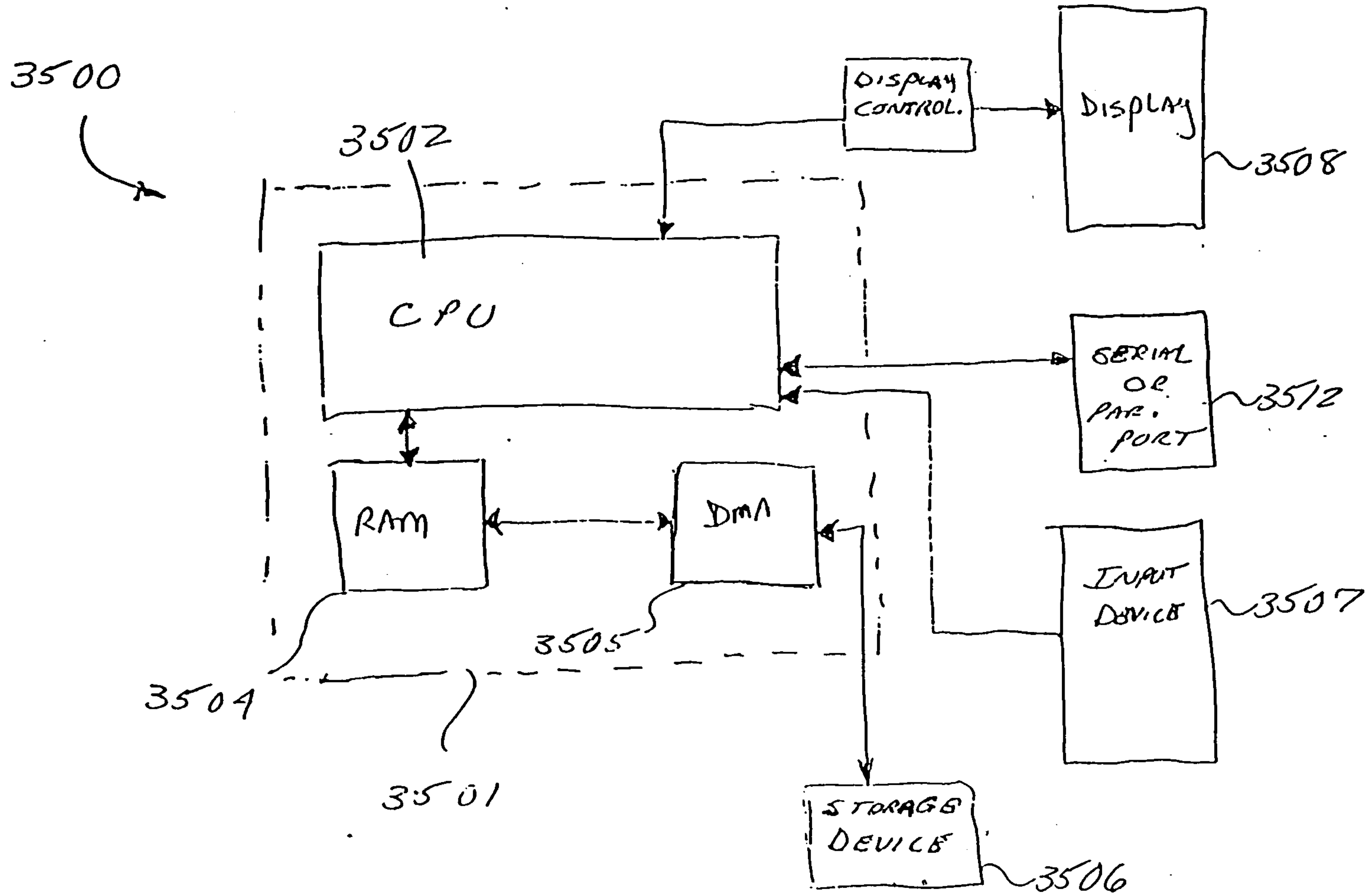

3100
3402
DSP Core
Micro-controller
RAM
3404
D-to-A
Custom Digital
Custom Analog
ROM
3404
A-to-D
Serial Port
3406

FIG. 34

FIG. 35



3500
3502
CPU
RAM
DMA
3504
3505
3501
DISPLAY CONTROL.
DISPLAY
3508
SERIAL OR PAR. PORT
3512
INPUT DEVICE
3507
STORAGE DEVICE
3506